

THE SUSTAINABILITY ENIGMA

By Peter Clarke and Aaron Penn

The CPG industry is in the midst of a crash course education in sustainability, with the lion's share of attention focusing on packaging. The reigning strategy of many brand owners appears to be centered on material use and selection, with three common approaches: source reduction, increased use of post-consumer recycled content and new bio-derived/degradable materials.

These approaches can be effective at reducing waste. Take, for example, what Nestlé has done by reducing the gram weight of its PET water bottles. The brand was able to achieve an almost 30 percent reduction of the eco-footprint of the package and is now looking to include more recycled content as well.

While this is a great example of a sustainable success story, it should also be considered in the context of future scalability. Source reduction has inherent limitations because, at its core, packaging must maintain specific technical requirements. In the case of the lightweighted PET bottle, it can only be taken so far before it loses the rigidity required for appropriate handling and stability. To focus entirely on material may result in designs that are at odds with packaging's primary roles of effective product containment, durability and functionality.

> NEW CHALLENGES ARISE

This raises new challenges about how to approach the "greening" of your pack, and where to look for alternatives.

Are you thinking about stripping away material, or extending usefulness

One area to consider may be that of reusable and refillable packaging. It can be argued that if a product requires more robust packaging due to its unique characteristics, extending the use of that package beyond containment—and thus extending its life—could represent a compelling design strategy.

Let's look at a typical household product, like window cleaner. The need for effective product application has created a durable, multi-component trigger spray pump mechanism, the usability of which can certainly exceed the short lifespan of a single bottle. The vessel is made of a durable rigid material that was manufactured to resist atmospheric pressures and top load, and thus is able to live beyond the volume of product it contains.

Recently, we've seen several innovations in this category. Wonder Tablitz created a spray bottle with an integrated compartment that contains three dissolvable tablets of cleaning concentrate. The bottle can be used over and over again by simply placing a tablet inside and filling the bottle with water from the tap. Once the tablets are used, the user can purchase more without ever having to purchase an additional bottle or sprayer.

A similar strategy directed Reckitt Benckiser's new line of Glass Plus cleaning products. Here, dissolvable pouches of concentrate are sold in two-packs. The pouches can be dropped in an empty spray bottle, which is then filled with warm water to create 32oz of Glass Plus surface cleaner. >



Digging deeper, we find that there are refill/reuse strategies at play in other areas as well. Restore Products, a Minnesota-based manufacturer of ecological cleaning products for residential and commercial use, has developed an automated refilling station for retail stores. The station recognizes encoded Restore brand bottles and refills them with one of five different cleaning products. Restore's stations have extended their initial Minnesota territory to include stores in neighboring Wisconsin, Illinois and Iowa and have been picked up by several Whole Foods stores in the region.

At Petco, cat litter is sold in typical large plastic pails, but can be refilled in-store from a large hopper. The pet supply retailer recognized that these packs had value in their durability that could be easily extended if a refill option were made available.

But refill programs can be rife with complications and are only appropriate for certain types of products. Many of us are familiar with the bulk dry goods hoppers at stores like Whole Foods. At first glance, this seems like a pretty straightforward offering that reduces packaging to a minimum. But retailers claim that these hopper systems can incur additional costs due to a higher rate of product loss from spoilage and spilling. Those who have invited consumers to bring in their own packaging have run up against health code regulations, which are intended to protect store environments from outside contamination.

Regardless of the approach, there is a measurable synergy between reusable/refillable packaging and consumer mindset and behaviors. A recent study conducted through the DEFRA Waste and Resources Research Programme in the UK traced and tested the correlation between refill packaging and the consumer's need for value and convenience. The study maintained that, while current examples are few and far between, there is certain opportunity for growth, just so long as baseline convenience is preserved.

New developments in cosmetic and personal product refills have already begun popping up and other markets are being explored as well.

> DON'T SACRIFICE PERFORMANCE

If you are contemplating a sustainable shift for your brands' packaging, there is one rule that should guide any decision you make: Never sacrifice the technical performance of the package.



> The Wonder Tablitz bottle is designed for reuse. Once the initial product supply is used, consumers buy tablets of concentrated cleaner and refill the bottle with water from the tap.

While the benefit of certain material strategies such as lightweighting or changing from a rigid to a flexible platform can have a clear and measurable impact on your waste footprint, they can also result in the diminished performance of the pack.

Consider the fact that packaging is but a small fraction of the overall environmental impact of a product. In the case of many food products, the impact from agricultural production alone can exceed 10 times the greenhouse gas emissions of the entire production and distribution cycle of the packaging.

Thus if your new sustainable packaging designs result in any increased loss of product, through breakage, spoilage or even reduced evacuation during use, the resulting impact can defeat the goal of the pack in the first place, and perhaps even make your environmental impact worse than it was. This may seem like an obvious consideration, but it requires a disciplined approach to the design of new packaging.

It is deceptively easy to become wrapped up in the excitement around emergent materials and processes. But unless these new technologies can meet or exceed the requirements of your current product, they can be a major pitfall in the quest to become more sustainable. **BP**

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